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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
) 92-28
Amendment of Section 2.106 of the) ET Docket No. ~~90-28~~
Commission's Rules to Allocate the) RM-7771 PP-29 PP-32
1610-1626.5 MHz and the 2483.5-2500) RM-7773 PP-30 PP-33
MHz Bands for Use by the Mobile-) RM-7805 PP-31
Satellite Service, Including) RM-7806
Non-geostationary Satellites)

REPLY COMMENTS

Constellation Communications, Inc. ("Constellation"), by its attorneys, hereby submits these "Reply Comments" in the above-captioned matter.¹ In this proceeding, the Commission is proposing to allocate the bands 1610-1626.5 MHz (L-band) and 2483.5-2500 MHz (S-band) to the mobile satellite service (MSS). These bands are currently allocated to the radiodetermination-satellite service (RDSS). The Commission's proposals are intended to implement the Final Acts of the 1992 World Administrative Radio Conference ("WARC"). Constellation is an applicant for a low earth orbit ("LEO") satellite system in these bands, and supports the Commission's proposals.

¹ This proceeding was initiated by the Commission's "Notice of Proposed Rule Making and Tentative Decision", FCC 92-358 (released September 4, 1992), ("Notice").

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I. The Commission Should Immediately Adopt The Primary 1992 WARC MSS Allocations In The 1610-1626.5 MHz (Earth-To-Space) And 2483.5-2500 MHz (Space-To-Earth) Bands

The comments filed in this proceeding to date indicate widespread support for adopting the primary 1610-1626.5 MHz (Earth-to-space) and 2483.5-2500 MHz (space-to-Earth) allocations. Adoption of these allocations will allow the early implementation of non-geostationary satellite systems in the RDSS bands. Such systems, such as the one proposed by Constellation, will provide personal satellite communications services, including voice, data, facsimile and position determination.

Outstanding issues concerning these allocations relate to the question of which entities should be granted licenses to use these frequencies, and whether they should be used for geostationary satellite systems.² Of all the parties, Motorola Satellite Communications, Inc. ("Motorola") remains adamant that it can not and will not share use of the 1616-1626.5 MHz band with any other user. The exclusive frequency assignment sought by Motorola is contrary to the Commission's policies and international regulations. The other LEO applicants have proposed use of spread spectrum techniques which allow sharing among several LEO systems as well as with the existing users of the bands. Constellation is confident that the details of workable sharing arrangements will be developed in the course of the negotiated rule making proceeding in CC Docket No. 92-166.³

Constellation also believes that the RDSS bands should be reserved for the pending LEO system

² Constellation also pointed out that certain footnote provisions, i.e. RR Nos. 753X, 731X and 733E, required clarification and may not be appropriate for inclusion in the national table of frequency allocations. See Constellation "Comments" at 7-8. In particular, Constellation is concerned that RR Nos. 731X and 733E might be misinterpreted to unfairly shift the burden of reaching coordination agreements to the MSS rather than being shared among the various primary services in the band.

³ See "Public Notice," DA 92-1085 (released August 7, 1992), and "Public Notice," DA 92-1691 (released December 15, 1992).

applicants. Geostationary MSS systems already have access to the 1525-1559 MHz space-to-Earth band and the 1626.5-1660.5 MHz bands for a total of 68 MHz of conventional MSS L-band spectrum. This is twice the spectrum available in the RDSS band. The AMSC Subsidiary Corporation ("AMSC") claims that its existing allocation is not enough spectrum, because of coordination difficulties it is experiencing with other geostationary satellite systems.⁴ While it seeks exclusive access to yet another 20 MHz of spectrum, it offers no assurance that this additional spectrum will be enough to resolve its coordination difficulties. Constellation believes that the RDSS L- and S-bands should be assigned to multiple LEO systems that can share the bands among themselves and with existing users of the bands. In this way, LEO systems can begin providing economical, personal satellite communications services to the public in the latter half of this decade at an earlier date than geostationary systems. If AMSC can not economically provide service within its current exclusive frequency assignment, it would be imprudent for the Commission to assign even more spectrum to such a system.⁵

The Commission was correct in rejecting the proposal of Celsat, Inc. ("Celsat") in this proceeding. The pending LEO applicants are part of a cut-off group for which applications had to be filed by June 3, 1991. Celsat has yet to file an application, and inclusion of its proposal at this late date would be improper and only delay the introduction of the innovative services proposed by the LEO system applicants in the current cut-off group. Moreover, there are a number of other frequency bands that are

⁴ "Comments of AMSC Subsidiary Corporation" at 2 and 7.

⁵ AMSC's clear preference is for the exclusive assignment to it of 10 MHz of uplink spectrum at 1616.5-1626.5 MHz in order to match 10 MHz of downlink spectrum at 1515-1525 MHz which has already been rejected by the United States for MSS use. Moreover, AMSC seeks any additional spectrum, preferably on an exclusive basis. To this end, AMSC submits selective, worst case technical analyses intended to denigrate other proposed systems, but avoids applying the same level of critical analyses to its own use of the frequencies.

perfectly adequate for Celsat's proposal, including the lower half of the conventional MSS L-band and the other new MSS allocations between 1 and 3 GHz made by the 1992 WARC. Rather than delay consideration of the long-pending LEO applications in the RDSS bands, the Commission should defer the Celsat proposal to proceedings to implement these other MSS allocations.

II. The Commission Should Not Implement The Secondary Downlink Allocation At 1613.8-1626.5 MHz At This Time

Constellation described specific types of harmful interference that could be caused by secondary downlink transmissions in this primary uplink band.⁶ These cases include: (1) main beam-to-backlobe interference, (2) main beam-to-main beam interference, and (3) user terminal-to-user terminal. Since operations under a secondary allocation must cease operations if they cause harmful interference to operations under the primary allocation, no purpose would be served by adopting a secondary downlink allocation in this band if it can not be implemented in practice.

Other parties in this proceeding⁷ have expressed similar views that the use of the 1613.8-1626.5 MHz band for space-to-Earth transmissions will cause harmful interference to Earth-to-space operations being conducted on a primary basis in this band. The only proponent of this secondary allocation, Motorola, has yet to demonstrate how it can conduct such secondary operations without causing harmful interference. Until a convincing showing is made by Motorola,⁸ Constellation urges the Commission to

⁶ Constellation "Comments" at 5-6.

⁷ See e.g., "Comments of Ellipsat Corporation" at 11-12, "Comments of Loral Qualcomm Satellite Services, Inc." at 12-14, and "Comments of TRW, Inc." at 13-16.

⁸ Constellation noted that the Commission rejected a similar proposal for bidirectional transmissions for the mobile satellite service even after substantial technical analyses were submitted in support of such a proposal. See "Notice of Proposed Rule Making", FCC 90-63 (released March 5, 1990), in Gen Docket No.

defer implementation of this secondary downlink allocation.

III. The Commission Should Finalize Its Tentative Decision Not To Award Motorola A Pioneer's Preference

Although all of the LEO applicants requested a pioneer's preference, only Motorola requested reconsideration of the Commission's tentative decision on this matter. Constellation opposes Motorola's attempt to re-open this issue, and urges the Commission to promptly reject Motorola's claim and finalize its decision not to award Motorola a pioneer's preference.

In various filings⁹, Constellation and the other LEO applicants demonstrated why Motorola did not warrant a pioneer's preference. Nothing new has been raised in Motorola's comments to warrant reconsideration of the Commission's decision not to grant Motorola a pioneer's preference. Moreover, the Commission could not grant Motorola a pioneer's preference as a matter of law or policy. Since Motorola's application seeks exclusive use of 10.5 MHz of the L-band MSS/RDSS allocation, grant of a pioneer's preference to Motorola would effectively deny all of the other applications because the remaining 6 MHz of L-band spectrum would be inadequate to operate a LEO system. Such action would violate the other applicants' hearing rights under the Communication Act. 47 U.S.C. § 101 et seq. Moreover, because the Motorola system cannot share with any other user, operation of Motorola's system would be in violation of international regulations because the United States could not successfully coordinate the Motorola system with any other country wishing to use the band for another purpose for which the band is allocated. Finally, grant of such a preference would be inconsistent with long standing

90-56 at paragraph 29.

⁹ This includes filings made under a protective order with respect to Motorola's confidential filings.

Commission policies strongly promoting sharing and coordination of multiple systems. Rather than allow Motorola to prolong controversy over this matter, the Commission should promptly reject Motorola's claims and finalize its decision not to award Motorola a pioneer's preference.

IV. The Commission Should Clarify its Position on The Availability of Bands For Feeder Links

As Constellation and other parties observed in their initial comments,¹⁰ the Commission should clarify its characterization of feeder links to LEO systems as "secondary."¹¹ As previously noted in the comments in this proceeding, RR No. 2613 merely identifies an operational requirement to be satisfied in the coordination of two primary uses of the fixed-satellite service bands.

In addition, the Commission should clearly adopt a policy that allows LEO feeder links to be established in any fixed-satellite service band, subject to appropriate coordination procedures. In particular, the Commission should review its dismissal of the use of the 5150-5250 MHz band for LEO feeder links in light of current usage, and should indicate the availability of other bands, including the fixed-satellite service allotment bands, for LEO feeder links.

Conclusion

In summary, Constellation believes that the Commission should immediately adopt primary MSS allocations in the 1610-1626.5 MHz (Earth-to-space) and 2483.5-2500 MHz (space-to-Earth) bands to

¹⁰ Constellation "Comments" at 9-10, "Comments of Ellipsat Corporation" at 8-9, "Comments of Loral Qualcomm Satellite Services, Inc." at 17-20, and "Comments of TRW, Inc." at 24-27.

¹¹ See Notice at paragraph 26.

reflect the results of the 1992 WARC and to provide for the early introduction of LEO satellite systems in these bands. However, the Commission should refrain from adopting the secondary allocation of the 1613.8-1626.5 MHz band for space-to-Earth transmissions until detailed technical operating rules are adopted in the CC Docket No. 92-166 proceedings. Constellation also urges the Commission to finalize its decision not to award a pioneer's preference to Motorola. Finally, the Commission should clarify its policies on the use of any fixed-satellite service band for LEO feeder links and its characterization of such use as secondary under the provisions of RR No. 2613.

Respectfully submitted,

CONSTELLATION COMMUNICATIONS, INC.

A handwritten signature in black ink, appearing to read "Robert A. Mazer", with a long horizontal flourish extending to the right.

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January 6, 1993.

CERTIFICATE OF SERVICE

I, Robert A. Mazer, hereby certify that the copies of the foregoing Comments were served by first-class mail, postage prepaid, this 6th day of January 1993, on the following persons:

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